

Claims

1. A fuel cell comprising:
a catalyst coated proton exchange membrane disposed
between an anode substrate and a cathode substrate, each of said
substrates being provided with an edge seal formed of a sealant
material extruded into the substrate by a hot lamination process, at
least one of said substrates having a foam gasket adhered thereto by
said sealant material film during said hot lamination process.
2. A fuel according to claim 1 wherein both of said
substrates have a foam gasket adhered thereto by said sealant
material during said hot lamination process.
3. A fuel cell according to claim 1 wherein:
said sealant material comprises a thermoplastic polymer.
4. A fuel cell according to claim 1 wherein:
said sealant material comprises a thermoset polymer.
5. A fuel cell according to claim 1 wherein:
said sealant material comprises an elastomeric polymer.
6. A fuel cell according to claim 1 wherein only one of
said substrates has a foam gasket adhered thereto, and wherein:
the other of said substrates has a reactant gas flow field
plate adhered thereto by said sealant material which is extruded into
said substrate by said hot lamination process, and a reactant gas
flow field plate related to said one substrate is adhered to said first

C_2

7. A fuel cell stack comprising a plurality of fuel cells according to claim 6 compressed together, whereby the foam gasket of one fuel cell provides a gas seal with the second reactant flow field plate of a fuel cell adjacent thereto in said stack.